

AMENDMENTS TO THE ABSTRACT

Please delete the abstract in its entirety, and insert the following in place thereof:

--An apparatus and method for processing of imaging data using differences between analog photocell data elements is disclosed. Under an embodiment of the invention, a system comprises an array of analog photocells; a first plurality of shift cells, an output of each shift cell in the first plurality of shift cells being coupled to an input of the next shift cell in the first plurality of shift cells, each of the photocells in the array of analog photocells being coupled to a corresponding shift cell in the of the first plurality of shift cells; a second plurality of shift cells, an output of each shift cell in the second plurality of shift cells being coupled to an input of the next shift cell in the second plurality of shift cells, a signal from a terminating output of the first plurality of shift cells being transferred to an input of a first shift cell in the second plurality of shift cells; a regeneration amplifier having an input coupled to the terminating output of the first plurality of shift cells and having an output coupled to the input of the first shift cell of the second plurality of shift cells; and a differential operational amplifier having at least two inputs, a first input of the differential operational amplifier being coupled to the terminating output of the first plurality of shift cells and a second input being coupled to a terminating output of the second plurality of shift cells.--